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INFECTIOUS MYXOMATOSIS OF DOMESTIC RABBITS 1/

(Mosquito Disease; Big-head Disease)

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Occurrence and Common Names

Infectious myxomatosis is a specific, rapidly fatal, contagious disease caused by the filtrable virus (an ultramicroscopic agent) Myxomatosum. It was first discovered in Mexico in domestic rabbits maintained for laboratory purposes, and in recent years it has been found also along the west coast of California. It is called "mosquito disease" by some rabbit breeders because it is found more frequently in low marshy areas where mosquitoes are numerous around the rabbitries. Although it has not been definitely proved, there is evidence that it is transmitted by some species of mosquitoes and perhaps other insects. Because of the edema around the ears, eyes, lips, and nose in the first stages of the disease, resulting in an abnormal swelling of these parts, it is frequently referred to as "big-head disease."

Transmission

The disease is highly infectious among rabbits, but it does not appear to be transmissible to other animals or to man. A minute quantity of blood or of the exudate from the eye of an affected animal is capable of reproducing the disease in a susceptible animal if introduced into a scratch in the skin, rubbed into a scarified area, or placed in the eye. Animals artificially infected with the virus show symptoms of the disease in about 10 days and die within 4 or 5 days after the appearance of the first symptoms. Recent studies by the junior author show that in a rabbitry the virus may be carried from one animal to another by mosquitoes.

1/ Reissued with slight revisions from Leaflet BS-89 issued by the Bureau of Biological Survey under the Department of Agriculture in May 1937.

Symptoms and Mortality

Animals affected with infectious myxomatosis show lack of appetite, lusterless eyes with a purulent discharge, and a rough coat. The eyelids, nose, lips, ears, and vent become congested and swollen. The edema of the ears causes these parts to become very heavy and pendulous, a characteristic symptom. As the swelling around the body openings increases with the progress of the disease, there is a purulent discharge from the nose as well as from the eyes, breathing is labored, and the animal becomes comatose. The disease is uniformly fatal, and when it is introduced into a rabbitry the mortality may be 20 to 90 percent of the adult animals. The young are less frequently affected. In the few cases that are not fatal, the swelling gradually subsides, leaving in its place firm protruding nodules around the ears, nose, and feet.

Post-mortem

Animals that die as a result of infectious myxomatosis show no characteristic gross internal changes by which the disease can be definitely diagnosed. Positive diagnosis can be made only by laboratory procedures. If the edematous parts are incised, the cut surface is white, gelatinous, and glistening, and will bulge slightly. When pressed, the surface will exude a clear serous fluid. Internally there is often a congestion or partial solidification of the lungs, probably sufficient to produce death. The spleen is enlarged, dark, and pulpy.

Prevention and Control

Although it is possible to immunize rabbits against infectious myxomatosis, the process at present is too costly and complicated except in unusual instances. The best method of control consists of early recognition of the disease and immediate destruction of all animals showing symptoms. Dead animals and all the bedding, litter, and unused feed in pens in which affected or exposed animals have been kept should be burned or buried several feet under ground as soon as possible. Exposed animals--those that have been in contact with or associated with affected stock--should be removed from the rabbitry and kept in isolated quarters for 2 weeks, and all equipment should be thoroughly scrubbed with a good disinfectant solution.

In selecting a site for a rabbitry it is well to remember the possibility of insect transmission of this and other diseases and to choose a place as free from insects as possible and provide adequate screening against mosquitoes and other small insects. When insects are present in large numbers, it is often difficult to protect the animals against their attacks.